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## **A study on economic assessment of simultaneous use of depleted oil reservoirs for underground natural gas storage and enhanced oil recovery**

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The economic viability of simultaneous gas injection for underground natural gas storage and enhanced oil recovery was examined with depleted reservoir IZ-2 located South Eastern Nigeria. The geologic and engineering information on the reservoir were gathered with which the costs analyses were conducted. The storage capacity and costs of the depleted reservoir were used in conducting the profitability analyses through the expected revenue. The reservoir is suitable for underground gas storage and enhanced oil recovery with its working gas capacity and deliverability of 2.18 Tcf and 46.42 MMscf/d, respectively. The reservoir has a positive and high net present value (NPV) of \$1.96 billion at 10% discount rate. The pay-out period of 0.106 year and profit per dollar invested (P/\$) of 114.4 for the project indicated that it is economically viable.

### **Biography**

Anyadiegwu C I C is the Head of Department, Petroleum Engineering, Federal University of Technology, Owerri, and Imo State. His research interest includes Oil and Gas Production and Processing from fossil fuels and non-fossil fuels (Biomass), Health, Safety and Environment (HSE) and Oil Spillage Detection, Control and Prevention.

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